NWS: EHB-6, Modification Note 59
DoD: TO 31P1-4-108-587
FAA: EEM Modification Handbook 6345.1 CHG 19, Chap 16

MODEM TESTING AND ADAPTATION DATA CHANGES TO SUPPORT THE FAA WARP PROGRAM; ITWS PROGRAM; AFWA OPUP PROJECT; AND STANDARDIZING PORT NAMING CONVENTION

DOPPLER METEOROLOGICAL RADAR WSR-88D

PUBLISHED UNDER AUTHORITY OF THE SECRETARIES OF
COMMERCE, THE AIR FORCE, THE NAVY, AND TRANSPORTATION

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FAA APPROVAL:

Date 3-16-00

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BY ORDER OF THE SECRETARY OF THE AIR FORCE

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Chief of Staff

Date 3-29-00

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TOMA

1. SUBJECT

Modem testing and adaptation data changes to support the FAA Weather and Radar Processor (WARP) program; FAA Integrated Terminal Weather System (ITWS) program; Air Force Weather Agency (AFWA) Open System Principal User Processor (OPUP) Project; and standardizing port renaming convention.

2. PURPOSE

The purpose of this routine document is to provide instructions to rename narrowband communication ports and provide data to the FAA WARP, the FAA ITWS, and the AFWA OPUP at selected sites. Initially, this will involve performing RPG Modem test procedures to make sure the existing modem(s) is set up properly and operational. It will involve configuring the ports designated as FAA DED #1 to reflect the associated ITWS, FAA DED #2 to reflect the associated WARP and the AFOS PUES port to reflect the associated OPUP. It will also involve renaming of ports for standardization. The authority for this modification is Operational Support Facility (OSF) Engineering Change Proposal (ECP) F0139.

OPUP telecommunications will be facilitated through Sprint and the NEXRAD-Communications Service (NCS) contract. The FAA Telco vendor for WARP, and possibly ITWS, will be MCI LINCS. Sprint utilizes a standard Telco line-loss configuration, while MCI LINCS utilizes a zero dBm line-loss service.

Cross connects from the MCI 66 demarcation block to the RPG dedicated 66 demarcation block will be the responsibility of the NEXRAD technician and ideally the cross connect should be performed in the presence of the MCI installer. Performing the cross connect (see ATTACHMENT 4) in the presence of the MCI installer will ensure MCI is on-site to perform end-to-end loopback test and troubleshooting.

NOTE: This change has been reviewed and evaluated for impacts upon Y2K functionality and has no detrimental effect upon Y2K compliance issues.

For additional information concerning this document, contact the OSF Hotline, Norman, Oklahoma; phone number: (800) 643-3363 or (405) 366-2980 or by e-mail at Hotline@osf.noaa.gov. An electronic copy of this document can be found at the following internet address: www.osf.noaa.gov/ssb/sysdoc/techman/tmlinks.htm

3. SITES AFFECTED

See ATTACHMENT 5.

4. ESTIMATED COMPLETION DATE

This modification must be completed no later than 60 days after receipt of this document and kit.

5. EQUIPMENT AFFECTED

Radar Product Generation (RPG).

6. SPARES AFFECTED

Not applicable.

7. MODIFICATION ACCOMPLISHED BY

Site electronics technicians will perform this modification. Two technicians are required to perform the attached procedures.

8. MATERIAL REQUIRED

Nomenclature	Part Number	NSN	Qty
Twisted cable[a]	WC63-5BB4U	6145-01-458-9237	20 ft

a. For WARP and ITWS connections only.

9. SOURCE OF MATERIALS

Kits are requisitioned by the OSF Logistics Section and shipped at no cost to the site.

10. SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED

Not applicable.

11. TIME AND PERSONNEL REQUIRED

Work Phases	Work-hours
Unpacking	0.0
Disassembly	0.0
Installation	0.50
Assembly	0.0
Operational Check	1.50
Total Work-hours	2.0

12. DOCUMENTS AFFECTED

Not applicable.

13. VERIFICATION STATEMENT

This modification was successfully installed at the OSF.

14. DISPOSITION OF REMOVED AND REPLACED PARTS/MATERIALS

Not applicable.

15. PROCEDURES

ATTACHMENT 1, RPG Modem Test Procedures

ATTACHMENT 2, Application Software Changes

ATTACHMENT 3, Narrowband Circuit Reports and Reconfiguration Control Menus (Posted on the internet at http://www.osf.noaa.gov/ssb/queries/comms/index.asp)

ATTACHMENT 4, Cross Connect Diagram

NOTE: As the FAA WARP program processes their MCI LINCS telecommunication service orders and MCI-assigned circuit IDs, circuit ID information will be passed back to the WSR-88D Hotline. The WSR-88D Hotline will post the new circuit ID information into your WSR-88D Communication Documentation Notebook and e-mail an updated copy of the notebook to you as soon as the circuit information is made available. If MCI LINCS arrive at your facility and you have not received a Communication Documentation Notebook in advance, please contact the WSR-88D Hotline at 1-800-643-3363.

16. FAA DISTRIBUTION

This directive is distributed to selected offices and services within Washington headquarters, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, regional Airway Facilities divisions, and Airway Facilities field offices having the following facilities/equipment: NXRAD.

17. CHANGES TO TABLE OF CONTENTS (FAA)

This chapter will be included in the next revision to the table of contents for FAA Order 6345.1, Electronic Equipment Modification Handbook - Next Generation Weather Radar (NEXRAD).

18. RECOMMENDATIONS FOR CHANGES (FAA)

Forward any recommendations for changes to this directive through normal channels to the National Airway Systems Engineering Division, AOS-200, Operational Support.

19. REPORTING INSTRUCTIONS

a. NWS

Report completed modification on WS Form A-26, Engineering Management Reporting System Maintenance Record, according to instructions in EHB-4, Part 2, using reporting code RPG. Also, record the modification number in block 17(a) as 59 (see ATTACHMENT 7 for a completed sample of WS Form A-26).

b. DoD

Update the AFTO Form 95 to show TCTO compliance. Report TCTO compliance in accordance with TO 00-20-2, Table 3-10, Rule 9.

c. FAA (Changes to Recorded Data)

Enter this document number, date, and chapter number in the appropriate FAA Form 6032-1, Airway Facilities Modification Record.

d. All Agencies

Complete ATTACHMENT 6 and fax, mail, or e-mail information to:

(1) Mail Address: System Support Branch, Logistics Section
Operational Support Facility
3200 Marshall Ave., Suite 101
Norman, Oklahoma 73072-8028

(2) Fax Number: (405) 366-6553
ATTN: Logistics Section

(3) E-mail Address: Logistics@osf.noaa.gov

NWS: EHB-6, Modification Note 59
DoD: TO 31P1-4-108-587
FAA: EEM Modification Handbook 6345.1 CHG 19, Chap 16

ATTACHMENT 1

RPG MODEM TEST PROCEDURES

Tool Required:

Punchdown Tool

Technical Manual Required

TITLE: Maintenance Instructions, Radar Product Generation (RPG), dated Jul 15, 98.
NWS: EHB 6-520
DoD: AF TO 31P1-4-108-42
FAA: TI 6345.1 V11

NOTE

At all locations where the FAA has a Center Weather Service Unit (CWSU) PUP association to NEXRAD, the PUP association will be in place on the FAA DED#1 port. In all cases where an ITWS association must be established, it too must be facilitated on the FAA DED#1 port. The FAA DED#2 port is reserved for and will be configured through this modification for WARP. Any user "borrowing" the FAA DED#2 port needs to be removed in order to facilitate the WARP connection.

1. Verify the modem(s) for WARP, ITWS, and OPUP are programmed properly using EHB 6-520 (AF TO 31P1-4-108-42), paragraph 6.6.4, Dedicated Port (Rack-Mounted) Modem (Codex 3263) UD22A1A9-A21 Setup Procedures.

2. Leased Line Modem (Codex 3263) check for the RPG under test:

   a. Remove the appropriate modem's surge protectors between the RPG and the outside section of the leased line termination block, 2-RJ2DX. Note the position of the surge protectors since they will be reconnected in a later step.

      (1) Select one Associated PUP (APUP) modem to use for testing. If possible, select an unused port.

      (2) If no unused ports are available, ensure the associated PUP users are aware of the pending and temporary off-line status.

   b. Set the APUP leased-line modem to "Originate," then follow the procedures below.

      (1) At the modem front panel, press the **DOWN** button until `MODULATION OPT'S` is displayed.

      (2) Press the **ACROSS** button until `Mode = ____` is displayed.

      (3) Press the **DOWN** button until `Originate` is displayed.

(4) Press the **ENTER** button.

(5) Press the **RETURN** button.

(6) Press the **DOWN** button until `TELCO OPT'S` is displayed.

(7) Press the **ACROSS** button until `LL Tx Level =____` is displayed.

(8) Press the **DOWN** button until `LL Tx Level = -15` is displayed.

(9) Press the **ENTER** button.

(10) Press the **RETURN** button twice.

NOTE

The demarcation block has 50 vertical connections starting at the top with 1 and ending at the bottom with 50. Leased-line modem 1 is at the top with TX at terminals 1 and 2, and RX at terminals 3 and 4. Modem 2's TX 5 and 6 with RX at 7 and 8, etc. For RPGs with more than 12 leased-line modems, the 13th through 24th modem will be on a second demarcation box.

c. Using a set of four jumper wires, or cable WC63-5BB4U, connect the TX pair of the APUP modem to the RX pair of the modem under test and the RX pair of the APUP modem to the TX pair of the modem under test. Refer to ATTACHMENT 3 to download your site specific information. You may need to test one or more modems. For example, if the modem under test is modem 2 and the APUP modem is 1, the pin assignments would be: pin 1 to pin 7, pin 2 to pin 8, pin 3 to pin 5, and pin 4 to pin 6 at the RPG side of the phone demarcation box.

d. Verify that both modem front panels (dedicated modems 1 and 2) read `Data 14400` (this takes a few seconds).

e. Leave the jumper wires, or cable WC63-5BB4U on pins 1, 2, 3, and 4 (`Originate` modem), but move the wire ends connected to pins 5, 6, 7, and 8 four pins down from the next modem under test.

f. Verify that both modem front panels read `Data 14400` (this takes a few seconds).

g. Repeat paragraphs 2.e. and 2.f. until all WARP, ITWS, and OPUP leased-line modems have been tested. Refer to ATTACHMENT 5 for your site's effectivity.

ATTACHMENT 1 (Continued)

RPG MODEM TEST PROCEDURES

NOTE

This test may not work if the transmit level is set to 0 dBm. It may be necessary to set the transmit level lower to -15 dBm to work from modem to modem.

h. Reset the APUP leased-line modem to `Answer`.

(1) At the modem front panel, press the **DOWN** button until `MODULATION OPT'S` is displayed.

(2) Press the **ACROSS** button until `Mode =____` is displayed.

(3) Press the **DOWN** button until `Answer` is displayed.

(4) Press the **ENTER** button.

(5) Press the **RETURN** button.

(6) Press the **DOWN** button until `TELCO OPT'S` is displayed.

(7) Press the **ACROSS** button until `LL Tx Level =____` is displayed.

(8) Press the **DOWN** button until `LL Tx Level = -15` is displayed for WARP and ITWS. Use `LL Tx Level =0` for OPUP.

(9) Press the **ENTER** button.

(10) Press the **RETURN** button twice.

i. Reinstall the surge protectors that were removed in paragraph 2.a.

j. Return the equipment and work area to its original status.

NOTE

LL Tx Level = -15 dBm for WARP and ITWS because FAA installations use zero-loss circuits. (Reference NWS EHB 6-520, AF TO 31P1-4-108-42, and FAA TI 6345.1 V11, paragraph 6-6.4)

k. Install 4 wire Telco cable WC63-5BB4U between the MCI 66 block and the appropriate RPG 66 block location(s). Refer to ATTACHMENT 3 for Site-Specific Narrowband Circuit Reports and ATTACHMENT 4, Figure 1, for detailed cross connect diagrams. Not all sites will be connected to WARP, ITWS, and/or OPUP.

ATTACHMENT 2

APPLICATION SOFTWARE CHANGES TO EXPANSION PORTS AT THE RPG

NOTE

If you have RDA/RPG Remote Access Terminal installed, refer to the corresponding keystrokes applying to your system (i.e., <Enter> versus <Return> and <Alt><Tab> versus <Shift> and <Port> keys). RDA/RPG Remote Access Terminal keystroke differences will be located in the conversion chart provided with the RDA/RPG Remote Access Terminal installation kit. All keystrokes having a double underline will require you to refer to the conversion chart for the applicable key strokes (i.e., <Return> will convert to <Enter>).

1. Update Narrowband Adaptation Data by performing the following procedures and referencing the narrowband circuit report and reconfiguration control menu (see ATTACHMENT 3 for the internet address).

NOTE

Look for PUPID/PASSWD changes for FAA DED#1, FAA DED#2, and AFOS PUES.

a. Ensure the Radar Product Generation (RPG) is operating at the start of these procedures.

b. Have one blank Small Computer System Interface (SCSI) tape ready for backing up adaptation files.

NOTE

The following procedure requires the RPG to be powered down. Before continuing, notify your operations personnel and users of a temporary service interruption over the next 15 to 20 minutes.

2. Perform the following procedures:

a. At the Unit Control Position (UCP) terminal (application mode), press function key **<F1>** to display the RPG main menu.

b. At the UCP Main menu, enter **AD,***password1***,NB,***password2***,RE<Return>** to allow modification of the narrowband configuration.

NOTE

If the password (PUP ID/Password) is typed incorrectly, use a **<Shift><Tab>** to retype the password; a backspace will become part of the password.

c. At the command line, enter **M,***line#***<Return>**. Repeat as necessary to update all new narrowband configuration lines. Use the site-specific sheet downloaded from ATTACHMENT 3. Edit the ID currently assigned to `PUPID/PASSWD` or `LINE CLASS` as indicated on the Reconfiguration Control document.

d. Edit the ID currently assigned to `LINE`: (see ATTACHMENT 3 - NARROWBAND CIRCUIT REPORTS/RECONFIGURATION CONTROL MENUS) to WARP, ITWS, and or OPUP. When editing is complete, press the **<Return>** key.

NOTE

These changes will not be saved until the RPG is rebooted.

e. Enter **U,Y<Return>** and then **E<Return>** to make changes.

f. Press function key **<F1>** to display the RPG Main menu.

g. At the command line, enter **U,SH,O<Return>** to shut down the RPG application software and allow the narrowband configuration to go into effect.

h. Press the **<Shift>** and **<Port>** keys simultaneously to display the System Console. (If collocated RPG/RDA, you should have the RDA maintenance terminal in the RPG system console mode.)

i. At the * prompt, enter **RPGUP<Return>** to start the application software.

j. At the UCP Main Menu, enter **ST,C<Return>** to verify the narrowband configuration changes are correct. If not, repeat steps 2.a. through 2.i.

k. Press function key **<F1>** to return to the Main menu.

l. At the SCSI tape unit, insert a blank cartridge tape in the SCSI tape drive and slide the lever to the locked position. Ensure the tape is secured in the SCSI tape drive.

m. At the command line, enter **U,SH,O<Return>** to shut down the RPG application software.

n. Press the **<Shift>** and **<Port>** keys simultaneously to display the System Console. (If collocated RPG/RDA, you should have the RDA maintenance terminal in the RPG system console mode.)

ATTACHMENT 2 (Continued)

APPLICATION SOFTWARE CHANGES TO EXPANSION PORTS AT THE RPG

NOTE

Ensure this software change is saved to the RPG backup SCSI tape as soon as possible. Backup procedures can be found in "Tales from the Hotline" topic 1-30 (Hotline web page Tales from the Hotline topic #5509 - 5506 - http://www.osf.noaa.gov/ops/5506.htm). Instructions for using BACKFILE were provided with the build 10 training material.

o. At the * prompt, enter **BACKFILE<Return>**. This loads data files to the SCSI tape. When the transfer is complete, `END OF TASK Ø` is displayed. This step may take up to 10 minutes.

p. Remove the cartridge from the SCSI tape unit. Label and date the backup tape with the site name and names of the files copied. Store the tape in a safe but accessible location.

q. At the * prompt, enter **RPGUP<Return>** to start the application software.

r. If you would like the OSF Configuration Management (CM) Section to store a copy of your updated Adaptation Data, make an additional copy of the Adaptation Data by repeating steps 2.f. through step 2.q. and mail this tape to the following address:

System Support Branch, Configuration Management
WSR-88D Operational Support Facility
3200 Marshall Ave., Suite 101
Norman, OK 73072-8028

ATTACHMENT 3

NARROWBAND CIRCUIT REPORTS/RECONFIGURATION CONTROL MENUS

1. Access the Internet address (URL) below and download the site-specific Narrowband Circuit Report and Reconfiguration Control Menu.

   http://www.osf.noaa.gov/ssb/queries/comms/index.asp

   If unable to download the site-specific Narrowband Circuit Report and Reconfiguration Control Menu, contact the OSF Hotline to obtain the required information.

NOTE

Reference Attachment 5 to determine which system(s) - WARP, ITWS, or OPUP will be associated with your specific site. Next reference the WSR-88D Communication Documentation notebook and information obtained from the OSF internet address above. Note the new port assignment requirements and resolve any potential user conflicts as follows.

2. SPECIAL PORT CONSIDERATIONS

   a. FAA DED #1 and FAA DED #2 for WARP and ITWS:

   At all locations where the FAA has a CWSU PUP association to NEXRAD, the PUP association will be in place on the FAA DED #1 port. In all cases where an ITWS association must be established, it too must be facilitated on the FAA DED #1 port. The FAA DED #2 port will be configured through this modification exclusively for WARP. At some locations the new FAA port requirements will create contention problems for authorized port users. It is important to distinguish between an authorized FAA user and any other agency user "borrowing" an FAA port. FAA users may be currently assigned to either the FAA DED #1 or DED #2 ports. If your system currently shows an authorized FAA user on either the FAA DED #1 or FAA DED #2 ports, take NO action until you are notified by the WSR-88D Hotline that telecommunications delivery is scheduled (ITWS for FAA DED #1, WARP for DED #2).

   Upon receipt of notification from the WSR-88D Hotline that telecommunications delivery for WARP is scheduled, if a FAA user is on the FAA DED # 2 port, that user will have to be moved to the FAA DED #1 port. The existing CWSU PUP narrowband adaptation and telecommunications punchdown on the FAA DED #1 port must be removed and the FAA DED #2 port should then be configured for WARP.

   Upon receipt of notification from the WSR-88D Hotline that telecommunications delivery for ITWS is scheduled, if it exists, CWSU PUP connectivity on the FAA DED #1 will have to be removed. The existing CWSU PUP narrowband adaptation and telecommunications punchdown on the FAA DED #1 port must be removed and the FAA DED #1 port should then be configured for ITWS.

ATTACHMENT 3 (Continued)

NARROWBAND CIRCUIT REPORTS

b. PUES Port for OPUP

Before proceeding with reconfiguring the PUES port for OPUP, verify the PUES port is no longer required for passing data to AFOS. At DOD locations, the PUES port connectivity will be to a neighboring NWS office AFOS. The NWS connectivity will be shown on the Narrowband Circuit Report. Once confirmation is made and the PUES port is no longer required, the port should be reconfigured for OPUP.

ATTACHMENT 4

CROSS CONNECT DIAGRAM

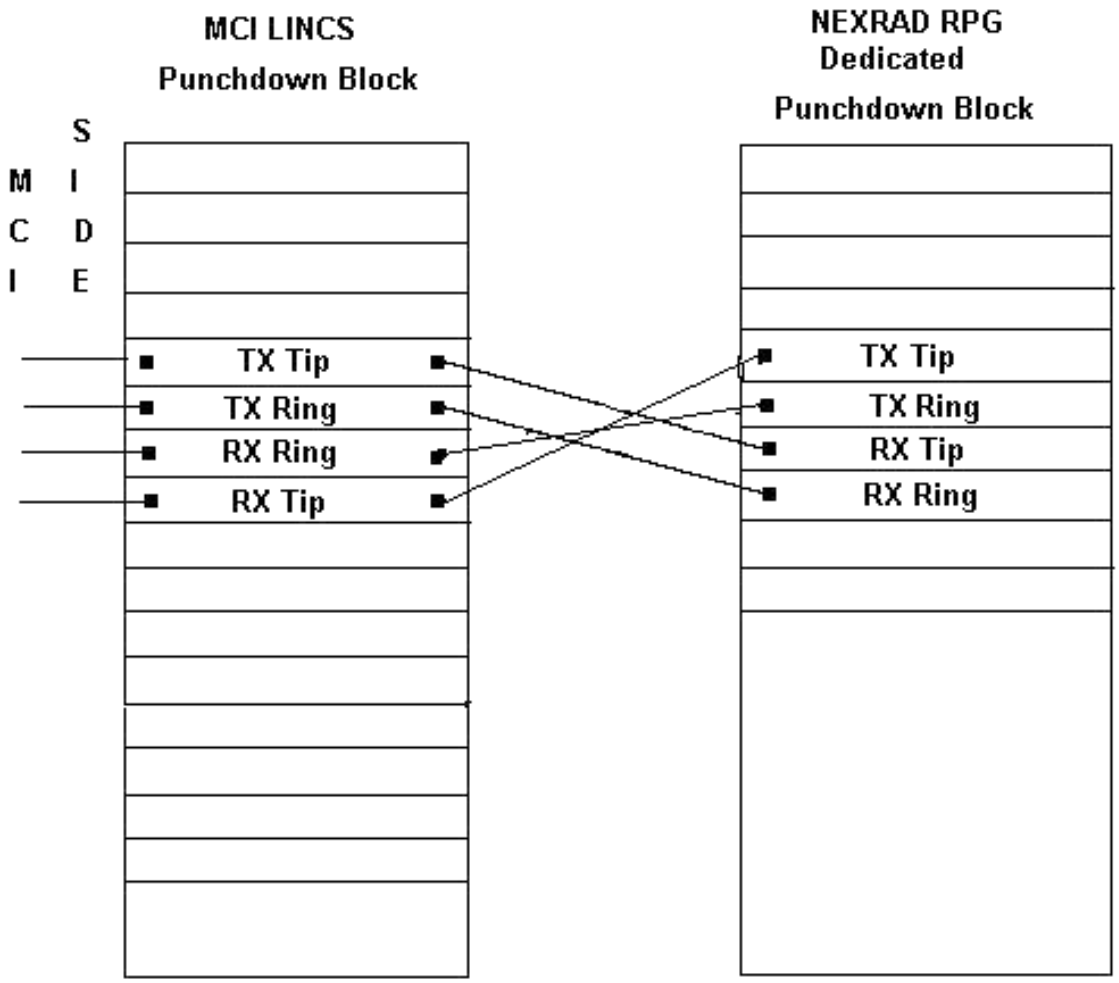

Figure 1. Detail Cross Connect Diagram

ATTACHMENT 5

EFFECTIVITY

NOTES

The following site effectivity indicates the type and quantity of kits each site will receive. Pursuant to WARP and ITWS, for every X, one 20-ft twisted cable (part number WC63-5BB4U, NS N6145-01-458-9237) will be required. Where a numeric value is noted rather than an X, that quantity of cables is required. Only adaptation changes are required for sites noted where WARP, ITWS associations are not noted. OPUP connections do not require the 20-ft twisted cable and will only be required to update their adaptation data.

The sites listed below with a footnote will be receiving this document and kit on or about April 10, 2000. All other sites will be receiving this document and kit several months later.

Site Name	SID	Org Code	WARP	ITWS	OPUP
NWS					
Eastern Region					
WSFO Albany, NY	ALY	WN9518	X		X
WSO Binghamton, NY	BGM	WN9515	X		
WSFO Boston, MA	BOX	WN9509	X	X	
WSFO Brookhaven, NY	OKX	WN9912	X	X	
WSFO Buffalo, NY	BUF	WN9528	X		
WSO Burlington, VT	BTV	WN9617	X		
WSFO Caribou, ME	CAR	WN9938	X		
WSO Charleston, SC	CHS	WN9208	X		X
WSFO Charleston, WV	RLX	WN9414	X		
WSO Cincinnati, OH	ILN	WN9710	X	3	X
WSFO Cleveland, OH	CLE	WN9524	X	X	
WSFO Columbia, SC	CAE	WN9310	X		X
WSO Greer, SC	GSP	WN9312	X	X	
WSO Morehead City, NC	MHX	WN9307	X		
WSFO Norfolk, VA	AKQ	WN9952	X		X

ATTACHMENT 5 (Continued)

EFFECTIVITY

Site Name	SID	Org Code	WARP	ITWS	OPUP
WSFO Philadelphia, PA	PHI	WN9950	X	2	X
WSFO Pittsburgh, PA	PBZ	WN9917	X	X	
WSFO Portland, ME	GYX	WN9938	X		
WSFO Raleigh/Durham, NC	RAH	WN9306	X	X	X
WSO Roanoke, VA	RNK	WN9954	X		
WSO State College, PA	CTP	WN9925	X		
WSFO Sterling, VA	LWX	WN9931	X	X	2
WSO Wilmington, NC	ILM	WN9301	X		
	Southern Region				
WSFO Alberquerque, NM	ABQ	WP9365	X		X
WSO Amarillo, TX	AMA	WP9363	X		
WSFO Atlanta, GA	FFC	WP9219	X	X	X
WSFO Austin/San Antonio, TX[a]	EWX	WP9253	X		X
WSFO Birmingham, AL	BMX	WP9957	X		
WSO Brownsville, TX	BRO	WP9250	X		
WSO Corpus Christi, TX[a]	CRP	WP9251	X		
WSFO Dallas/Ft Worth, TX[a]	FWD	WP9259	X	X	
WSO El Paso, TX	EPZ	WP9270	X		X
WSO Houston, TX[a]	HGX	WP9935	X	X	
WSFO Jackson, MS	JAN	WP9235	X		
WSO Jacksonville, FL	JAX	WP9206	X		X
WSFO Key West, FL	BYX	WP9201	X		
WSO Knoxville, TN	MRX	WP9325	X		
WSO Lake Charles, LA[a]	LCH	WP9240	X		
WSFO Little Rock, AR	LZK	WP9340	X		X
WSFO Lubbock, TX[a]	LUB	WP9933	X		

ATTACHMENT 5 (Continued)

EFFECTIVITY

Site Name	SID	Org Code	WARP	ITWS	OPUP
WSO Melbourne, FL	MLB	WP9204	X		X
WSFO Memphis, TN	MEG	WP9334	X	X	
WSFO Miami, FL	MFL	WP9918	X	2	X
WSO Midland/Odessa, TX[a]	MAF	WP9265	X		
WSO Mobile, AL	MOB	WP9223	X		X
WSO Nashville, TN	OHX	WP9327	X	X	
WSFO Norman, OK[a]	OUN	WP9921	X	3	X
Northeast Alabama	BMX	WP9957	X		
WSO San Angelo, TX[a]	SJT	WP9263	X		
WSO Shreveport, LA[a]	SHV	WP9248	X		X
WSFO Slidell, LA[a]	LIX	WP9919	X	X	
WSO Tallahassee, FL	TLH	WP9214	X		
WSO Tampa, FL	TBW	WP9961	X	X	X
WSO Tulsa, OK[a]	TSA	WP9356	X	X	
Western Arkansas[a]	TSA	WP9356	X		
Central Region					
WSO Aberdeen, SD	ABR	WR9659	X		
WSFO Bismark, ND	BIS	WR9764	X		X
WSFO Cheyenne, WY	CYS	WR9564	X		X
WSFO Chicago, IL	LOT	WR9969	X	X	
WSFO Denver, CO	DNR	WR9469	X	X	
WSFO Des Moines, IA	DMX	WR9546	X		
WSFO Detroit, MI	DTX	WR9954	X	X	X
WSO Dodge City, KS	DDC	WR9451	X		
WSO Duluth, MN	DLH	WR9745	X		
WSFO Fargo/Grand Forks, ND	FGF	WR9750	X		X

ATTACHMENT 5 (Continued)

EFFECTIVITY

Site Name	SID	Org Code	WARP	ITWS	OPUP
WSO Goodland, KS	GLD	WR9465	X		
WSO Grand Island, NE	GID	WR9552	X		
WSO Grand Junction, CO	GJT	WR9476	X		
WSO Grand Rapids, MI	GRR	WR9635	X		
WSO Greenbay, WI	GRB	WR9645	X		
WSFO Indianapolis, IN	IND	WR9438	X	X	X
WSO Jackson, KY	JKL	WR9956	X		
WSO La Crosse, WI	ARX	WR9643	X		
WSFO Lincoln, IL	ILX	WR9436	X		
WSFO Louisville, KY	LMK	WR9423	X	X	X
WSO Marquette, MI	MQT	WR9743	X		
WSFO Milwaukee, MI	MKX	WR9965	X	X	
WSFO Minneapolis, MN	MPX	WR9658	X	X	
WSFO NCL Michigan, MI	APX	WR9610	X		
WSFO North Platte, NE	LBF	WR9562	X		
Northern Indiana	IWX	WR9534	X		X
WSFO Omaha, NE	OAX	WR9553	X		X
WSO Paducah, KY	PAH	WR9957	X		
WSO Pleasant Hill, MO	EAX	WR9446	X	X	X
WSO Pueblo, CO	PUB	WR9464	X		X
WSO Quad City, IA	DVN	WR9544	X		
WSO Rapid City, IA	UNR	WR9662	X		X
WSFO Riverton/Lander, WY	RIW	WR9576	X		
WSFO Sioux Falls, SD	FSD	WR9651	X		
WSO Springfield, MO	SGF	WR9440	X		
WSFO St Louis, MO	LSX	WR9971	X	X	X
WSFO Topeka, KS	TOP	WR9456	X		

ATTACHMENT 5 (Continued)

EFFECTIVITY

Site Name	SID	Org Code	WARP	ITWS	OPUP
WSO Wichita, KS	ICT	WR9450	X	X	X
Western Region					
WSO Billings, MT	BYZ	WT9677	X		
WSFO Boise, ID	BOI	WT9681	X		X
Cedar City, UT	SLC	WT9932	X		
WSO Elko, NV	LKN	WT9903	X		
WSO Eureka, CA	EKA	WT9594	X		
WSO Flagstaff, AZ	FGZ	WT9375	X		
WSO Glasgow, MT	GGW	WT9768	X		
WSFO Great Falls, MT	TFX	WT9950	X		X
WSO Las Vegas, NV	VEF	WT9386	X		X
WSFO Los Angeles, CA	LOX	WT9295	X		
WSO Medford, OR	MFR	WT9597	X		
WSO Missoula, MT	MSO	WT9773	X		
WSO Pendleton, OR	PDT	WT9688	X		
WSFO Phoenix, AZ	PSR	WT9278	X	X	X
WSO Pocatello, ID	PIH	WT9578	X		
WSFO Portland, OR	PQR	WT9698	X		
WSFO Reno, NV	REV	WT9488	X		
WSO Sacramento, CA	STO	WT9914	X		X
WSFO Salt Lake City, UT	SLC	WT9932	X	X	X
WSO San Diego, CA	SGX	WT9918	X		
WSFO San Francisco, CA	MTR	WT9933	X		
WSO San Joaquin Valley, CA	HNX	WT9389	X		
Santa Ana Mountain/San Diego, CA	SGX	WT9918	X		X
WSFO Seattle, WA	SEW	WT9922	X		X
WSO Spokane, WA	OTX	WT9785	X		X

ATTACHMENT 5 (Continued)

EFFECTIVITY

Site Name	SID	Org Code	WARP	ITWS	OPUP
WSO Tucson, AZ	TWC	WT9274	X		X
Yuma, AZ	PSR	WT9278	X		
DoD					
Altus AFB, OK[a]	FDR	FE4419	X		X
Andersen AFB, GU	GUA	FE5240			
Beale AFB, CA	BBX	FE4686	X		X
Camp Humphreys, ROK	KSG	FI5294			
Cannon AFB, NM	FDX	FE4855	X		X
Columbus AFB, MS	GWX	FE3022	X		X
Dover AFB, DE	DOX	FE4497	X		X
Dyess AFB, TX[a]	DYX	FE4661	X		X
Edwards AFB, CA	EYX	FE2805	X		X
Eglin AFB, FL	EVX	FE2823	X		X
Ft Campbell, KY	HPX	FY4812	X		X
Ft Drum, NY	TYX	FY4846	X		X
Ft Hood, TX[a]	GRK	FY4824	X		X
Ft Polk, LA[a]	POE	FY4825	X		X
Ft Rucker, AL	EOX	FY4805	X		X
Holloman AFB, NM	HDX	FE4801	X		X
Kadena AB, JA	ODN	FH5270			
Keesler AFB, MS (OPS Trng)	BIX	FE3010			
Keesler AFB, MS (MNTC Trng A)	BIX	FE3010			
Keesler AFB, MS (MNTC Trng B)	BIX	FE3010			
Kunsan AB, JA	KJK	FH5284			
Lajes AB, ROK	PLA	FE4486			
Laughlin AFB, TX[a]	DFX	FE3099	X		X
Maxwell AFB, AL	MXX	FE3300	X		X

ATTACHMENT 5 (Continued)

EFFECTIVITY

Site Name	SID	Org Code	WARP	ITWS	OPUP
Minot AFB, ND	MBX	FE4528	X		X
Moody AFB, GA	VAX	FE4830	X		X
Robins AFB, GA	JGX	FE2067	X		X
Vance AFB, OK	VNX	FE3029	X		X
Vandenberg AFB, CA	VBX	FE4610	X		
FAA					
Anchorage, AK	AHG	6901AJ			
Bethel, AK	ABC	690112			
Fairbanks, AK	APD	690178			
Kamuela/Kohala Apt, HI	HKM	699235			
King Salmon, AK	AKC	690137			
Middleton Island, AK	AIH	690140			
Molokai, HI	HMO	699213			
Nome, AK	AEC	690147			
San Juan, PR	JUA	69F362	2	2	
Sitka, AK	ACG	690141			
South Kauai, HI	HKI	699211			
South Shore, HI	HWA	699201			

a. Will receive this document and kit by April 10, 2000.

NWS: Modification Note 59
DoD: TO 31P1-4-108-587
FAA: EEM Modification Handbook 6345.1 CHG 19, Chap 16

ATTACHMENT 6

MODEM TESTING, WARP, ITWS, OPUP AND STANDARDIZED PORT NAMING CONVENTION COMPLETION FORM

Site Name: _____

Site Identifier: _____

Total Time to Complete this Modification: _____

Technician's Name(s): _____

Technician's Phone Number: _____

Date Completed: _____

Problem(s) Encountered:

_____

_____

_____

_____

Upon completion of this form, mail, fax, or e-mail this information to the OSF:

1. Mailing Address: System Support Branch, Logistics Section
   WSR-88D Operational Support Facility
   3200 Marshall Ave., Suite 101
   Norman, OK 73072-8028

2. FAX Number: (405) 366-6553,
   ATTN: Logistics Section

3. E-mail Address: Logistics@osf.noaa.gov

NWS: EHB-6, Modification Note 59
ATTACHMENT 7

ENGINEERING MANAGEMENT REPORTING SYSTEM
MAINTENANCE RECORD

Document Number: **G 50234**

General Information

1. Open Date	Time	2. Initials	3. Response Priority (check one)	4. Close Date	Time
03 / 15 / 00	0900	TJS	O Immediate O Low O Routine ☒ Not Applicable	03 / 15 / 00	0930

5. Description: **RPG MODEM TESTING AND SOFTWARE CHANGES I.A.W. MOD NOTE 59**

Equipment Information

6. Station ID	7. Equipment Code	8. Serial Number	9. TM	10. AT	11. How Mal
LWX	RPG	B90-A0013	M	M	999

12. EQUIPMENT OPERATIONAL STATUS TIMES

a. Fully Operational	b. Logistics Delay	Partly Operational c. All Other	d. Logistics Delay	Not Operational e. All Other
				0:30

13. Parts Failure Information

Block #	a. ASN	b. NSN	c. TM	d. AT	e. How Mal.	f. Qty.	g. Maint. Hrs.
1							
2							
3							
4							
5							

14. Work Load Information

Type	Staff Hrs.
a. Routine	
b. Non-routine	
c. Travel	
d. Misc.	0:30
e. Overtime	

Miscellaneous Information

15. Maintenance Comments: **PERFORMED RPG MODEM TEST AND FOLLOWED SITE-SPECIFIC APPLICATION S/W CHANGES TO EXPAND 3 PORTS I.A.W. MOD NOTE 59**

16. Initials: **TJS**

17. SPECIAL PURPOSE REPORTING

a. Mod. No.	b. Mod./Act./Deact. Date	c.	d.	e.
59	03/15/00			

18. CONFIGURATION MGMT. REPORTING (use as directed)

ASN	Vendor Part Number (New Part)	Serial Number (Old Part)	Serial Number (New Part)